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2

Problemer i forbindelse med en eventuel anvendelse af den europæiske regningsenhed inden for den fælles landbrugspolitik

Die Problematik einer Verwendung der europäischen Rechnungseinheit in der gemeinsamen Agrarpolitik

Evaluation of the problems associated with the utilisation of the European unit of account for the common agricultural policy

Problématique de l'application éventuelle de l'unité de compte européenne à la politique agricole commune

Problemi di una eventuale applicazione dell'unità di conto europea alla politica agricola comune

Vraagstukken die rijzen bij het gebruik van de Europese rekeneenheid in het gemeenschappelijk landbouwbeleid

oktober
Oktober
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Ottobre
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Evaluation of the problems associated with the utilization of the European unit of account for the common agricultural policy

Fr.-jdl.-/cp

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C O N T E N T S

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INTRODUCTION

Unlike the new unit of account (EUA), the units of account initially used in the European Economic Community were based on fixed parities and stable exchange relationships in keeping with the international monetary system in operation before 1968[1]. As a result of the abandonment of this system, the old units of account no longer conform to reality and certain Community mechanisms based on the unit of account are no longer able to function normally.

The European unit of account (EUA) is a composite unit based on a 'basket' of currencies, whose value in Community currencies is calculated at market exchange rates and therefore reflects the true market situation at any given moment.

The EUA is used by the European Development Fund and the ECSC not only for the purpose of drawing up their budgets but also as a means of expressing most of their expenditure and revenue. It is also used by the European Investment Bank as a basis for conversion in the drawing-up of balance sheets and may be applied to the Community budget from 1 January 1978.

The Commission has now embarked on the harmonization of the units of account at present being used. It is moving towards a gradual and general adoption of the European unit of account and is studying the possibility of applying the EUA to the common agricultural policy.

The present paper attempts to:

- define the EUA and trace its development since it was introduced on 28 June 1974;
- analyse the working of the EUA on the basis of a number of simulation exercises;
- examine the possible effects of the use of the EUA on the common agricultural policy; and
- attempt to draw a number of conclusions both on the European unit of account itself and on the unit of account in general.

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[1] Introduction of the two-tier gold market

I. DEFINITION AND EVOLUTION OF THE EUROPEAN UNIT OF ACCOUNT

(a) Definition

The value of the European unit of account is defined as the sum of the countervalues of the following fixed amounts in Community currencies:

DM 0.828
FF 1.15
£(sterling) 0.0885
Lit 109.0
Fl 0.286
DKr 0.217
Bfrs 3.66
Lfrs o.14
£ (Irish) 0.00759

The fixed amounts in national currencies were computed from weighting coefficients based on the gross national products and volumes of European trade of the individual Member States. The initial value of the EUA on 28 June 1974 was as follows:

1 EUA = 1 SDR (special drawing right)
1 EUA = US $ 1.20635

(b) Daily calculation of the value of the EUA

The value of the EUA is calculated by finding the Belgian franc equivalent of the fixed amount in national currencies using the exchange rates on the Brussels commercial market as communicated by the Belgian Central Bank.

For the currencies of the other Member States the value is found by converting the initial value, calculated by the method described above, using the exchange rate for the Belgian franc on the Frankfurt, London, Dublin, Copenhagen, Amsterdam, Paris, Rome and Milan exchange markets.

The value of the EUA is also calculated in the currencies of the main non-member countries, in particular the dollar, Swiss franc and yen.

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(Example of calculation of the value of the EUA on 17 December 1975, published in OJ No. C21, of 30 January 1976, page 5)

Calculation of the initial value

Fixed currency amounts (1)		Exchange rates at 17 December 1975 on Brussels commercial market (Bfrs per currency unit) (2)	Value in Belgian francs (3) = (1) x (2)
Fl	0.286	14.71	4.20706
Bfrs	3.66	1.0	3.66
Lfrs	0.14	1.0	0.14
DM	0.828	15.046	12.458088
Dkr	0.217	6.402	1.389234
£ sterl.	0.0885	80.13	7.091505
FF	1.15	8.868	10.1982
Lit	109.0	0.057955	6.317095
£ir	0.00759	80.13	0.6081867
			Bfrs 46.0694
1 EUA = Bfrs 46.0694			

Calculation of the value
in the currencies of the other Member States

Initial value (1)		Exchange rates at 17 December 1975 on the relevant markets (currency unit per Belgian franc) (2)	Currency value (3) = (1) x (2)	
Bfrs	46.0694	0.06802	Fl	3.13364
		0.06649	DM	3.06315
		1.15625	Dkr	7.19834
		1/80.12	£ sterl.	0.575005
		0.112835	FF	5.19824
		17.2585	Lit	795.088
		1/80.2	£ir	0.574431

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Calculation of the value
in the currencies of non-member countries

Initial value (1)	Exchange rates at 17 December 1975 on Brussels commercial market (Belgian francs per currency unit) (2)	Currency value (3) = (1) : (2)	
Bfrs 46.0694	39.625	$	1.6263
	15.0625	SwF	3.05855
	7.112	Nkr	6.4777
	8.98	Skr	5.13022
	2.135	Sch	21.5782

(c) Evolution of the EUA

1. Evolution of the 'external' value of the EUA

This can be calculated only by comparing the value of the EUA with the value of the gold-based unit of account, which has remained unchanged. Between 28 June 1974 and 28 July 1977 the EUA depreciated by 18.67% in comparison with the gold-based unit.

2. Evolution of component currencies in terms of the EUA (28 June 1974 to 28 July 1977)

Table I

CHANGES IN THE VALUES OF CURRENCIES IN TERMS OF THE EUA
(Uj : rate of conversion)
between 28 June 1974 and 28 July 1977

Currencies	28 June 1974	28 July 1977	% change
Bfrs/Lfrs	45.8564	40.6639	+ 11.32
DM	3.10356	2.62102	+ 15.54
Fl	3.20949	2.80767	+ 12.52
£sterl/£ir	0.50486	0.665040	- 31.72
Dkr	7.25907	6.86828	+ 5.38
FF	5.81344	5.59273	- 3.79
Lit	780.476	1018.64	- 30.51

+ : revaluation of currency in terms of EUA

- : devaluation of currency in terms of EUA

3. Evolution of component currencies in terms of the EUA since 1970

Table II

CHANGES IN THE VALUES OF CURRENCIES IN TERMS OF THE EUA

(Uj : rate of conversion)

between the first three months of 1970 (average value)

and 28 July 1977

Currencies	1st three months 1970	28 July 1977	% change
Bfrs/Lfrs	51.1117	40.6639	+ 20.44
DM	3.74138	2.62102	+ 29.94
Fl	3.70049	2.80767	+ 24.12
£ sterl/ir	0.42593	0.665040	- 56.13
Dkr	7.66675	6.86828	+ 10.41
FF	5.67768	5.59273	+ 1.49
Lit	638.896	1018.64	- 59.43
US $	1.02223	1.15753	- 13.23

+ : revaluation of currency in terms of the EUA

- : devaluation of currency in terms of the EUA

II. WORKING OF THE EUROPEAN UNIT OF ACCOUNT (EUA)

The working of the EUA was analysed on a Hewlet-Packard HP 90 calculator programmed by a specialist.

Introduction

(a) Terminology and basic equations for the EUA

Terminology

EUA i = value of the EUA at time i in Belgian francs

wj = fixed number of units of the currency j in the EUA

Tji = rate of exchange of the currency j against the Belgian franc at time i

Uji = rate of exchange of the currency j against the EUA at time i

Pji = (variable) weight of the currency j against the EUA at time i

Basic equations

1) $$EUA\ i = \sum_{j=1}^{9} wj\ Tji$$

2) $$= \sum_{j=1}^{7} wj\ Tji \quad (£\ sterling + £ir;\ \ Bfrs + Lfrs)$$

3) $$Uji = \frac{EUA\ i}{Tji}$$

4) $$Pji = \frac{wj\ Tji}{EUA\ i} = \frac{wj}{Uji}$$

Derived equations

$$-\ EUA\ 1 = EUA\ 0 + wj\ (Tj1 - Tj0)$$

$$-\ \frac{EUA\ 1 - EUA\ 0}{EUA\ 0} = \frac{wj\ (Tj1 - Tj0)}{EUA\ 0}$$

EUA 1 = EUA at time 1

EUA 0 = EUA at time 0

* The subscript j denotes the single currency whose exchange rate against the Belgian franc changes.

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$$-Uj1 = \frac{EUA\ 1}{Tj1} = \frac{EUA\ 0 + wj\ (Tj1 - Tj0)}{Tj1}$$

$$Uj1 - Uj0 = \frac{EUA\ 0 + wj\ (Tj1 - Tj0)}{Tj1} - \frac{EUA\ 0}{Tj0}$$

$$= \frac{EUA\ 0 \times Tj0 + wj\ Tj0\ (Tj1 - Tj0) - EUA\ 0 \times Tj1}{Tj1 \times Tj0}$$

$$= \frac{EUA\ 0\ (Tj0 - Tj1) + wj\ Tj0\ (Tj1 - Tj0)}{Tj1 \times Tj0}$$

$$-\frac{Uj1 - Uj0}{Uj0} = \frac{EUA\ 0\ (Tj0 - Tj1) + wj\ Tj0\ (Tj1 - Tj0)}{Uj0 \times Tj1 \times Tj0}$$

(b) Initial data and basic hypotheses for simulation exercises

To simplify the calculations, the Belgian franc and Luxembourg franc were taken together, as were the £ sterling and the Irish £, making a total of seven Community currencies in the programme instead of nine (see basic equation no. 2).

All the simulation exercises were based on the initial data listed below.

Initial data

26 April 1977

Rate of exchange of each currency against the EUA (Uj) on 26.4.1977			Rate of exchange of each currency against the Belgian franc on 26.4.1977 (Tj)	
	DM	2.6709	DM 1	= Bfrs 15.2775
	FF	5.5822	FF 1	= Bfrs 7.3020
	£ sterling	0.6552	£1 sterling	= Bfrs 62.2800
	Lit	9.9865	Lit 1	= Bfrs 4.0860
EUA =	Fl	2.7754	Fl 1	= Bfrs 14.7025
	Bfrs	40.8047	Bfr 1	= Bfr 1.0000
	Dkr	6.7362	Dkr 1	= Bfrs 6.0575
	Lfrs	40.8047	Lfr 1	= Bfr 1.0000
	£ir	0.6552	£1 Irish	= Bfrs 62.2800

In addition, it was assumed in all the simulation exercises that a change in one currency was not accompanied by any modification of the value of the other currencies on the exchange market.

A. The weight of the componant currencies, a basic element in the working of the European unit of account

Definition

The weight of a currency (j) is equal to the ratio between
- the number of units of this currency in the EUA, and
- the rate of conversion of this currency against the EUA,

i.e. $$Pji = \frac{wj}{Uji}$$

Since the EUA is by definition a 'basket' of nine currencies, the sum of the weights of these nine currencies must equal 100

i.e. $$\sum_{j=1}^{9} Pj = 100\%$$

On 26 April 1977, the weights of the component currencies were as follows:

DM	31%
FF	20.6%
£ sterl.) £ir)	14.7%
Lit	10.9%
Fl	10.3%
Bfrs + Lfrs	9.3%
Dkr	3.2%

i.e. $$\sum_{j=1}^{7} Pj = 100\%$$

The first of the two factors determining the weight of a currency in the EUA 'basket' (i.e. the number of units of this currency in the EUA) is constant, while the second (i.e. the rate of conversion of this currency against the EUA) is variable. The weight of a currency in the EUA 'basket' therefore varies with the fluctuations of this currency on the exchange market.

Any revaluation of the currency (j) will result in an increase in the weight of this currency in the 'basket' and vice versa.

Thus, if the weight of the currency (j) increases, then the sum of the weights of the other currencies in the EUA will decrease and vice versa.

Weight and weighting

The weightings of the various currencies in the 'basket' were determined (see paragraph I(a): definition) on the basis of the gross national product and volume of European trade of the individual Member States.

The fixed number of units of each currency in the 'basket' was calculated on the basis of these weightings.

This gave each currency a weight of P 0 at time T 0.

On 28 June 1974, the weight of the D-mark was as follows:

$$PDM = \frac{0.828}{2.6709} = 27.3\%$$

If the weighting coefficients remain unchanged, the attenuating effect of the EUA on a given currency will vary with the weight of that currency in the 'basket'. Similarly, the effect on the value of the EUA of a change in the market exchange rate for a given currency will also vary with the weight of that currency in the 'basket'.

Variations in the weights of the component currencies

Weights of the component currencies of the EUA on 28.6.1974 and 26.4.1977 (as a percentage of the total weight)

	28.6.1974	26.4.1977
DM	27.3	31
FF	19.5	20.6
£ sterling) £ Irish)	19	14.7
Lit	14	10.9
Fl	9	10.3
Bfrs + Lfrs	8.2	9.3
Dkr	3	3.2
Total	100	100

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Weights of component currencies in the EUA on 26.4.1977 and 12.7.1977 (as a percentage of the total weight)

	26.4.1977	12.7.1977
DM	31	31.5
FF	20.6	20.6
£ sterling) £ Irish)	14.7	14.4
Lit	10.9	10.8
Fl	10.3	10.2
Bfrs + Lfrs	9.3	9.3
Dkr	3.2	3.2
Total	100	100

As can be seen from the above tables, the weights of the £ sterling (plus the £ Irish) and the Lira have decreased in the EUA 'basket'; the sum of the weights of the strong currencies (DM, Florin, Belgian and Luxembourg francs) increased from 44.5% on 28 June 1974 to 50.6% on 12 July 1977.

The value of the EUA will therefore now depend more on the trends taken by the latter currencies, which account for more than half the weight of the basket, whereas when the unit was first introduced it was influenced more by the 'weak' currencies.

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The following calculations illustrate, by means of practical examples, the significance of the weights of the various currencies with regard to the attenuating effect of the EUA and the effects on the EUA of a change in the value of one of the component currencies.

B. Changes in the value of the EUA and in the values of the component currencies in terms of the EUA

1. Change in the value of the EUA as a result of a revaluation or devaluation of a given currency on the exchange market

Application of the following equations:

$$EUA\ 1 = EUA\ 0 + wj\ (Tj1 - Tj0)$$

$$\frac{EUA\ 1 - EUA\ 0}{EUA\ 0} = \frac{wj\ (Tj1 - Tj0)}{EUA\ 0}$$

Table III
page 13

TABLE III

PERCENTAGE CHANGE IN THE VALUE OF THE EUA AS A RESULT OF A REVALUATION OR DEVALUATION OF X% IN RESPECT OF A CURRENCY IN THE 'BASKET'

Level of revaluation / devaluation	%	DM	FF	£	Lit	Fl	Dkr
revaluation	20	6.20	4.12	2.70	2.20	2.06	0.64
	15	4.65	3.09	2.03	1.65	1.55	0.48
	10	3.10	2.06	1.35	1.09	1.03	0.32
	5	1.55	1.03	0.68	0.55	0.52	0.16
devaluation	- 5	1.55	1.03	0.68	0.55	0.52	0.16
	-10	3.10	2.06	1.35	1.10	1.03	0.32
	-15	4.65	3.09	2.03	1.65	1.55	0.48
	-20	6.20	4.12	2.70	2.20	2.06	0.64

(a) The change in the value of the EUA resulting from a (percentage) upward or downward change in the value of one of the 'basket'currencies varies depending on the currency concerned.

Thus, a 10% revaluation of the D-mark would result in a 3.10% revaluation of the EUA, and a 10% revaluation of the Italian lira would result in a 1.10% revaluation of the EUA.

15% devaluations of the Dutch florin and the French franc would result in EUA devaluations of 1.03% and 2.06% respectively.

Example: 5% revaluation of the D-mark on 26 April 1977

EUA 1 = 40.8047 + 0.828 (16.0414 - 15.2775)

EUA 1 = Bfrs 41.4372

which represents an increase of 1.55% over the initial value of Bfrs 40.8047 ($\frac{41.4372 - 40.8047}{40.8047} = 1.55\%$).

The equation:

PDM (X%) = change in the value of the EUA

where X% represents the level of revaluation or devaluation of the currency, would have given the same result.

Thus, for 26 April 1977, the equation could have been written:

31.05 x 5% = 1.55%

This same equation can be used to find the change in the value of the EUA resulting from any change in the value of a currency.

The variation in the value of the EUA resulting from a change in the exchange value of one of the component currencies increases with increasing weight of the currency and vice versa.

(b) The same level of revaluation or devaluation of a given currency will result in the same variation in the value of the EUA

Thus, a 5% revaluation or devaluation of the French franc on the exchange market will result in a 1.03% appreciation or depreciation of the EUA.

(c) If the sum of the weights of the currencies which depreciate is greater than the sum of the weights of the currencies which appreciate, then the EUA will be devalued and vice versa.

2. Effects of a revaluation or a devaluation of a given currency on the value of this currency in terms of the EUA

Application of the following equation:

$$\frac{Uj1 - Uj0}{Uj0} = \frac{EUA\ 0\ (Tj0 - Tj1) + wj\ Tj0\ (Tj1 - Tj0)}{Uj0 \times Tj1 \times Tj0}$$

Table IV, page 16

Table IV reveals skewness between the rate of change of a currency on the exchange market and the change in its value in terms of the EUA (asymetry A1) on the one hand, and between the effects on the value of a currency in terms of the EUA of the same level of revaluation or devaluation (asymetry A2) on the other.

(a) Illustration of asymetry A1

Definition

If T1 represents the rate of change (revaluation or devaluation) of the currency (j) on the exchange market, and T2 (i.e. Uj1 - Uj0) represents the rate of variation of the currency in terms of the EUA, then:

$$A1 = T1 - T2$$

or

$$A1\ R = T1 - T2 \quad \text{(revaluation)}$$

or

$$A1\ D = T1 - T2 \quad \text{(devaluation)}$$

Table V, page 17

a.1 Revaluation

For the same level of revaluation (T1), asymetry increases with increasing weight of the currency concerned.

Example: in the event of 20% revaluation

A1 R £ = 20 - 14.222 = 5.778

A1 R = +5.15 in the case of the lira
+3.87 in the case of the Danish krone.

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TABLE IV

PERCENTAGE CHANGE IN THE VALUE OF A CURRENCY IN TERMS OF THE EUA AS A RESULT OF A DEVALUATION OR REVALUATION OF THAT CURRENCY

Level of	%	DM	FF	£ sterling £ Irish	Lit	Fl	Bfrs Lfrs	Dkr
revaluation	30	15,922	18,327	19,692	20,558	20,698	20,927	22,333
	20	11,499	13,236	14,222	14,847	14,949	15,114	16,129
	15	8,999	10,359	11,130	11,619	11,699	11,828	12,623
	10	6,272	7,220	7,757	8,098	8,154	8,244	8,798
	5	3,287	3,783	4,062	4,24	4,271	4,31	4,608
	3	2,009	2,313	2,485	2,594	2,612	2,641	2,818
	2	1,352	1,557	1,673	1,746	1,758	1,778	1,897
devaluation	- 2	-1,408	-1,620	-1,741	-1,818	-1,830	-1,850	-1,975
	- 3	-2,134	-2,456	-2,639	-2,755	-2,774	-2,804	-2,993
	- 5	-3,632	-4,178	-4,491	-4,688	-4,72	-4,77	-5,09
	-10	-7,666	-8,824	-9,481	-9,898	-9,966	-10,076	-10,753
	-15	-12,176	-14,015	-15,058	-15,720	-15,828	-16,003	-17,078
	-20	-17,249	-19,855	-21,333	-22,271	-22,423	-22,671	-24,194
	-30	-29,571	-34,037	-36,571	-38,179	-38,440	-38,866	-41,476

ASYMETRY

(A1 = T1 - T2)

Table V

	%	DM	FF	£	Lit	Fl	Bfrs	Dkr
revaluation	+30	+14,078	+11,673	+10,308	+ 9,442	+ 9,302	+ 9,073	+ 7,667
1R	+20	+ 8,501	+ 6,764	+ 5,778	+ 5,153	+ 5,051	+ 4,886	+ 3,871
	+15	+ 6,001	+ 4,641	+ 3,87	+ 3,381	+ 3,301	+ 3,172	+ 2,377
	+10	+ 3,728	+ 2,78	+ 2,243	+ 1,902	+ 1,846	+ 1,756	+ 1,202
	+5	+ 1,713	+ 1,217	+ 0,938	+ 0,76	+ 0,729	+ 0,69	+ 0,392
1D	-5	- 1,368	- 0,822	- 0,509	- 0,312	- 0,28	- 0,23	+ 0,09
devaluation	-10	- 2,334	- 1,176	- 0,519	- 0,102	- 0,034	+ 0,076	+ 0,753
	-15	- 2,824	- 0,985	+ 0.058	+ 0.72	+ 0,828	+ 1,003	+ 2,078
	-20	- 2,751	- 0,145	+ 1,333	+ 2,271	+ 2,423	+ 2,671	+ 4,194
	-30	- 0,429	+ 4,037	+ 6,571	+ 8,179	+ 8,440	+ 8,866	+11,476

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The asymetry increases with increasing levels of revaluation T1.

Example: in the event of a 5% revaluation

A1 R = +1.22 for the French franc

in the event of a 10% revaluation

A1 R = + 2.78 for the French franc

Asymetry A1 is always positive in the case of revaluation.

$$A1\ R > 0$$

a.2. Devaluation

In the case of devaluation, the asymetry may be either positive or negative.

$$A1\ D \gtrless 0$$

Example: the French franc

A1 D $>$ 0 for a level T1 $>$ 20%

In the event of 30% devaluation:

A1 DFF = -30 + 34.037 = +4.037

A1 D $<$ 0 for a level T1 $<$ 20%

In the event of 15% devaluation:

A1 DFF = -15 + 14.015 = -0.985

For each currency, the change from positive to negative occurs at a level of devaluation T1 which varies depending on the currency concerned.

A1 D becomes positive (using our initial data) from a level of devaluation T1:

$>$20% for the French franc
$\approx$15% for the £ sterling
$>$10% for the Dutch florin
$<$10% for the Belgian franc
$>$30% for the D-mark
$\approx$15% for the lira.

In other words, the greater the weight of the currency, the higher T1 must be before positive asymetry occurs.

Positive asymetry arising from the devaluation of a currency means that agricultural prices expressed in that currency will register an increase greater than the level of devaluation of the currency.

(b) Illustration of asymetry A2

$$A2 = A1\ R - A1\ D$$

For the same level of revaluation or devaluation, A1 R will be different from A1 D, regardless of the currency concerned. To be more precise, in the event of revaluation, the increase in the weight of the currency will cause an increase in asymetry A1 R while in the event of devaluation, the reduction in the weight of the currency will cause a reduction in asymetry A1 D.

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Since asymetry is a measure of the effect of moderation of the fluctuations of a currency on the value of that currency in terms of the EUA, it follows from the above calculations that:-

- The EUA will have an increasing moderating effect on the fluctuations of a currency on the exchange market with increasing weight of the currency in the 'basket'. Conversely, the lower the weight of the currency, the weaker the moderating effect of the EUA

- Below a certain weight, regardless of whether it is reached as a result of a devaluation of the currency or not, the EUA will intensify the fluctuations of the currency rather than moderate them. Thus, still taking our initial data as a basis, a 5% devaluation of the Danish krone would result in a loss of value of more than 5% (5.09%) against the EUA. A 30% devaluation of the same currency would result in a 41.47% devaluation against the EUA.

C. Effects of the revaluation or devaluation of a currency on the values of other currencies in terms of the EUA

The revaluation or devaluation of a given currency (j) results in an appreciation or depreciation of the EUA equal to:

$$\triangle \text{ EUA} = Pj \times \pm \text{ the rate of change of the currency}$$

If a change in the value of the currency (j) causes no change in the values of the other "basket" currencies on the exchange market (basic hypothesis), the rates of conversion of these currencies against the EUA will nevertheless still vary. Thus, a 5% revaluation of the D-mark on

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26 April 1977 would have resulted in the following change in the value of the French franc against the EUA:

$$UFF_1 = \frac{\text{EUA 1}}{\text{t FFO}}$$

$$= \frac{41.4372}{7.3020} = 5.6748\%$$

i.e. $$\frac{5.6748 - 5.5882}{5.5882} = -1.55\%$$

The change in the EUA value of 'basket' currencies which do not fluctuate on the exchange market is equal to the percentage change in the value of the EUA.

Thus, in the above example, a 5% revaluation of the D-mark results in a 1.55% increase in the value of the EUA and a 1.55% decrease in the value of all the other 'basket' currencies.

This is logical since a revaluation of the D-mark causes an increase in the weight of that currency and a reduction in the weights of the other currencies.

Thus, the effects of a change in the value of a given currency are spread over all the Community currencies.

This is the essential difference between the European unit of account (EUA) and the ' parity grid' unit. In the latter case, the conversion rate of a currency against the unit of account increases or decreases in proportion to the revaluation or devaluation of the currency. A change in the parity of one currency has no effect on the values of the other currencies in terms of the unit of account. With this type of unit of account, every country is responsible for the effects and results of its policies.

III. POSSIBLE USE OF THE EUROPEAN UNIT OF ACCOUNT (EUA) IN THE COMMON AGRICULTURAL POLICY

The gold-based unit of account became more and more difficult to apply as the monetary situation deteriorated. It therefore became necessary gradually to replace IMF conversion rates for the unit of account against national currencies with 'representative rates', and monetary compensatory amounts were introduced in order to bridge the gap between the market exchange rates for certain currencies and the rates for converting these currencies into units of account.

The system of representative rates and monetary compensatory amounts has in recent years added appreciably to the complexity and cost of the common agricultural policy.

The Commission is therefore considering applying the EUA to the common agricultural policy, particularly in order to counteract such large discrepancies between the market exchange rates for given currencies and the rates for converting such currencies into units of account.

A. Switchover from the gold-based unit of account to the European unit of account

As shown in the first part of this document, the 'external' value of the EUA has fallen by about 18.5% against the gold-based unit since its introduction on 28 June 1974.

This loss in value against the gold-based unit makes it impossible simply to substitute one for the other on a basis of parity, i.e.

1 EUA = 1 gold-based unit of account.

A switchover of this type would in effect automatically reduce agricultural prices in national currencies by about 18%, which would be neither politically not economically acceptable. A drop in prices of this magnitude would destroy the present market equilibrium and cause a fall in production.

An adjustment made by converting the European unit of account at the rate of

1 gold-based unit of account = 1 EUA x 118%

would have the consequences indicated below.

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The 'adjusted' EUA would have the same value in national currencies as the gold-based unit converted at market rates. An adjustment of this type would therefore be tantamount to aligning the 'representative rates' on the effective market exchange rates.

Such an alignment would not be acceptable since it would cause considerable increases in agricultural prices in countries with devalued currencies and, conversely, considerable reductions in countries with revalued currencies.

A second adjustment would therefore be necessary, resulting in a fresh differentiation between the prices adopted in the Member States. This differentiation would in practice take one of the following two forms:

- the introduction of frontier taxes or subsidies of the type which already exist in the form of monetary compensatory amounts; or

- direct aid to producers or consumers.

Moreover, subsequent changes in the value of the EUA (appreciation or depreciation) would call for the adoption of further corrective measures.

B. Effects on agricultural prices of changes in the rates for converting national currencies into EUA

(Application of the asymetry phenomena described above)

(i) The use of the EUA in the common agricultural policy would mean daily automatic changes in agricultural prices expressed in individual national currencies. This in itself is incompatible with the administration of common agricultural prices.

(ii) The use of the EUA would spread the effects of a change in the value of a single currency over the entire range of Community currencies.

For example, a 5% revaluation of the florin on 26 April 1977 would have caused a 0.52% increase in the value of the EUA and would thus have resulted in a corresponding increase in agricultural prices in all the other Member States.

Conversely, a 10% devaluation of the Italian lira on the same date would have caused a 1.09% devaluation of the EUA and would therefore have resulted in a corresponding fall in agricultural prices in all the other Member States.

However, it should be pointed out that the extent of the upward or downward movement of agricultural prices resulting from the revaluation of

the florin or the devaluation of the lira would also depend on whether these changes in values resulted in adjustments to other currencies on the exchange markets which, in their turn, would moderate or intensify the effects of the revaluation of the florin and the devaluation of the lira on the EUA.

(iii) In terms of national currencies, agricultural price fluctuations would be greater in countries with relatively low-weight currencies than in those with relatively high-weight currencies. In other words, the deflationary effect of revaluation on agricultural prices would decrease with increasing weight of the currency concerned.

The inflationary effect of devaluation would increase with decreasing weight of the currency concerned. Moreover, for currencies below a certain weight, the use of the EUA would no longer moderate the effects of such a devaluation on agricultural prices expressed in terms of the devalued currency. Instead, it would intensify them.

These effects of the use of the EUA in the common agricultural policy are neither politically nor economically neutral.

It is unlikely that all the Member States would agree to shoulder a part of the burden of adjustment resulting from the monetary policy of another country. A 'parity grid' unit of account would seem better suited to the present situation in which there is little coordination of monetary policy within the Community.

Because of the effects of intervention prices and threshold prices on agricultural prices and incomes, no Member State would at present want the former to fluctuate as a result of variations in its own currency, let alone in the currencies of other Member States.

Thus, the use of the EUA would necessarily imply more adjustments every time a currency fluctuated in order to ensure that the values of all the other currencies against the EUA remained unchanged. In other words, the conversion rates for Community currencies against the EUA would not automatically follow market fluctuations and could even be pegged. Three courses are open to a country whose currency has changed in value. It may:

- accept the effects of the appreciation or depreciation of its currency on agricultural prices, a policy which seems fairly unlikely for the reasons already mentioned even if it would logically be the right course of action;
- maintain a situation in which the effective rate of exchange for its currency is different from the rate of conversion against the EUA,

in which case recourse to monetary compensatory amounts would be inevitable; or

- resort to direct aid to compensate for the effects of the change in the value of its currency.

CONCLUSIONS

It is by no means certain that the use of the EUA would result in any significant improvements in the common agricultural policy. The present document shows that although the introduction of this unit of account is perfectly plausible from a technical point of view it would nevertheless be politically and economically unacceptable without corrective machinery or adjustments which would rob the EUA of its advantages over the gold-based unit of account and hence deprive it of all justification.

However, this calls for the following comments:

- The legitimate desire to harmonize the various units of account need not necessarily lead to the adoption of a single unit of measurement for all sectors of Community policy.

- While it would not seem to be actually necessary to introduce the EUA into the common agricultural policy, the use of this unit should positively be avoided in the intervention and settlement system of the European Monetary Cooperation Fund. Moreover, it is by no means certain that the new unit would offer adequate advantages over the EUR for the Statistical Office.

- The definition of a new unit of account such as the EUA does not solve every problem. All units of account offer advantages and disadvantages, but there are no grounds for supposing that the choice of any one of them would solve problems which are not connected with the selection of a given unit but result from the disintegration of the international monetary system and from the increasing disparities between the economic and monetary situations in the individual Member States.

One unit of account may be more suitable than another. Initially, the EUA seemed better adapted to the international monetary situation that the gold-based unit of account. However, the 'parity grid' unit is better suited to the present situation in which there is little coordination between monetary policies within the Community.